Democracy & Education

Creating a Democratic Mathematics Classroom

The Interplay of the Rights and Responsibilities of the Learner

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Abstract

One way in which democratic classrooms can reflect a democracy is by guaranteeing students some inalienable rights; Kalinec-Craig (2017) outlined Olga Torres's Rights of the Learner (Torres's RotL) in mathematics classrooms. However, democracies rely not only on citizens' rights, but on their willingness to take up certain responsibilities as well. We extend this idea to mathematics classrooms to explore the consequences of the interplay of learners' rights and responsibilities, in the context of the preparation of elementary mathematics teachers. In addition, we explore ways in which learners may overexercise their rights of the learner or opt out of exercising them entirely and the effects of each of those choices on mathematical learning in the classroom.

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Many teachers work hard to maintain an equitable learning environment in which all students can participate while also providing each student opportunities to exercise agency in the mathematics classroom. Students who have the agency to learn and engage in complex ideas develop their senses of mathematical authority, which supports their conceptual mathematical learning (e.g., Dunleavy, 2015; Povey & Burton, 2003; Schoenfeld, 1994). In general, we (the authors) believe that these aims are consonant with establishing democratic mathematics classrooms where teachers must carefully consider how to delegate authority while never being able to completely cede it to their students (Buzzelli & Johnston, 2001). For a democracy to function, its citizens must have rights; Kalinec-Craig (2017) discussed how she uses Torres's Rights of the Learner[1] (see Table 1; Torres, 2020) as a set of inalienable rights with which students are (or should be) imbued in the classroom. It is important

1 In the discussions about the Rights of the Learner that were prompted by the original Kalinec-Craig (2017) paper, we have noticed that Olga Torres's origination of the idea has gotten lost. We wish to honor her contribution by reattaching her name to the concept by referring from now on to "Torres's Rights of the Learner" or "Torres's RotL."

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to note that the concept of democratizing a classroom is not new (e.g., Dewey, 1923; Skovsmose, 1998), but we believe that a renewed focus on democratized mathematics classrooms built from the foundation of Torres's RotL can offer teachers one approach for achieving such a classroom.

Table 1. Torres's RotL and Their Potential Associated Responsibilities

Right	Responsibility	Questions and Implications Raised by the Rights and Responsibilities
To be confused	To persevere through that confusion to some state of resolution	Who decides when/how you persevere through that confusion? When are you done?
To claim a mistake and revise your thinking	To address that mistake by reasoning about your thinking and returning to work that seems finished	Who decides when you should return to the task and when you are done reasoning about the ideas you have claimed?
To speak, listen, and be heard	To take up opportunities to share your thinking when they are afforded to you; to ensure sure that your peers also have the opportunity to speak, listen, and be heard in the classroom	Who decides when/how to take up that opportunity to share and honor the "verbal floor" with another student?
To write, do, and represent only what makes sense to you	To notice in what ways you are engaging in the ideas on an individual level and to ensure that your peers also have the opportunity to write, do, and represent what makes sense to them	Who decides when you focus on your own thinking and when you engage with someone else's?

Mathematics educators also advocate for the development of equitable classrooms that promote student participation. One notable approach to achieve this end is Complex Instruction (CI) (Boaler, 2015; Cohen & Lotan, 2014; Featherstone et al., 2011), which posits that inequitable participation in mathematics is a result of status hierarchies that exist outside the classroom and are reified within it. Thus, one solution to inequitable participation (and therefore to unequal access to and learning of mathematics) is to break down said status hierarchies through purposefully structured groups. Boaler (2015) articulated the four major tenets of CI: multidimensionality, student responsibility for their own and their peers' learning, assigning competence, and group roles. Of these tenets, two of them (student responsibility and group roles) rely heavily on students taking up certain responsibilities in the classroom as they learn mathematics. By not taking up responsibilities, then, according to the central assumption of CI that "we are all smarter together," students are depriving others around them of the opportunity to learn with and from each other (Featherstone et al., 2011). In order to encourage this, heterogenous groups of students are each assigned roles to fulfill as the group explores a mathematical task. In an ideal CI task, the group cannot complete the task without all members fulfilling their group roles. Thus, the idea that students must take on certain responsibilities to their own and their peers' learning is integral to CI.

However, the main themes of CI raise questions about the role of responsibilities in a classroom that promotes Torres's RotL. What can be said of a classroom in which students exercise their rights as learners yet also have expected responsibilities to themselves and to each other? What complications are not considered that might further promote (or hinder) equitable participation for each student? It is the tension between rights and responsibilities in the classroom that we discuss in this paper. This discussion reflects the tensions in our society writ large: namely, the complicated intertwining of true democracy and true equity. The assumption that we would like to propose and problematize is this: in a healthy democracy, citizens have rights, but a democracy only functions if citizens also take up certain responsibilities associated with those rights. Some scholars have argued that the idea of students having responsibilities in the classroom is in the background of the Torres's RotL (see Boaler & Anderson, 2018), which Torres herself has also stated (Torres, personal communication, March 7, 2016; Torres, 2020). However, citizens can choose not to take up their responsibilities in certain circumstances, and as a result, we think it is important to question how and when students may similarly choose not to take up responsibilities in the classroom. Similarly, as we engage with the idea of the responsibilities of the learner, we want to ask why students may choose not to take them up or to exercise their rights to the detriment of others and their learning in the group.

Although we acknowledge that a discussion about rights and responsibilities can happen among practicing K–12 math teachers and/or mathematics learners, we as the authors are choosing to explicitly orient our conversation as two mathematics teacher educators (MTEs) who use Torres's RotL in our elementary mathematics content and methods courses with teacher candidates (TCs). Elementary TCs occupy a liminal space in transitioning from being mathematics learners (and products of a K–12 school system) to mathematics teachers. Thus, TCs in general must negotiate their rights and responsibilities as learners quickly, as they are soon asked to take on the responsibilities of being teachers as well with their own students.

Revisiting Torres's Rights of the Learner

Torres's RotL began as the foundational idea of Olga Torres and her vision for mathematics classrooms as safe spaces for children to communicate their thinking (Kalinec-Craig, 2017; Torres, personal communication, March 7, 2016; Torres, 2020). Children can demonstrate their thinking in a mathematics classroom in multiple ways: declaring a solution out loud to the class, writing down an algorithm on a piece of paper to show multi-digit multiplication, or

arranging blocks or counting tools to show an algebraic pattern. In any of the aforementioned ways, teachers must first create a safe environment for children to step into an unknown, risky space of learning mathematics. Furthermore, that same environment must encourage children to exercise at least four fundamental rights as learners, which Torres named as the Torres's RotL (i.e., you have the right to be confused; to claim a mistake and revise your thinking; to speak, listen, and be heard; and to write, do, and represent what makes sense to you). When teachers use various means of assessing children's thinking—such as divergent formative assessment, as described in Pryor and Crossouard (2008), that seeks to know *how* a child is thinking about a problem, not only *if* they have mastered the content—the roles of teacher and student become blurred. A student who is working in a small group to solve a task can step into the role of teacher as they exercise their Torres's RotL while they explain their thinking to another child or to the teacher. Similarly, the teacher can also become a learner of students' thinking when they set aside their expectations and presumptions of how a student might solve a problem and consider the true understanding as demonstrated by the child.

Most recently the ideas of Torres's RotL (Torres, 2020) and Kalinec-Craig's (2017) contextualizing of Torres's RotL in terms of divergent formative assessment have inspired others to consider how these rights inform their own practice and research. In the second issue of volume 25 of *Democracy & Education*, three articles highlighted further contextualization of Torres's RotL based on Kalinec-Craig (2017). Boaler and Anderson (2018) described how in the United States "one problem with the frequent use of summative assessment is that students feel they are performing in contrast to learning" (p. 3). The authors argued that classrooms need to be spaces that help "students to become autonomous learners who can self-regulate, know what they most need to learn, and know ways to improve their learning." (p. 3). In essence, Torres's RotL do not stop with the rights being exercised; instead, there are individual responsibilities that accompany those rights. As a result, teachers can purposefully design assessments that help children learn mathematics while simultaneously developing skills for learning new content that last long after instruction.

Hintz et al. (2018) have reminded us that teachers need to engage in the practice of pedagogical listening and that the teacher as a listener is significant and adds to this discussion of these learners' rights. They put emphasis on the teacher's responsibility to safeguard the child's rights. By engaging in pedagogical listening, teachers "engage in when listening to and for a student's struggle, which includes listening for what is needed—a new question, a new resource, a partner discussion, or even a whole shift in the classroom culture—so that the child's struggle becomes productive rather than *destructive*" (p. 4).

Finally, Kazemi (2018) talked about how there are demands on Torres's RotL that should be considered in the classroom:

> *It's one thing for students to have the right to say what makes sense when they are answering problems from a text and another when they are trying to solve a problem that is linked meaningfully to ideas or issues they are invested in . . . Perhaps the burden of interrupting status differences falls back on teachers, but ultimately, as students develop in their mathematical abilities, to advance our democratic goals, students must also become conscious of the ways that their actions constrain or empower their peers' abilities to learn. (pp. 3, 4)*

Kazemi reminded teachers and teacher educators that the burden of consciousness in equity and participation is a delicate balance in the classroom among and with students who hold varied mathematical experiences and ways of thinking.

In the following section, we unpack and problematize the nature of the responsibilities of the learner in the context of CI as a practice of maintaining student accountability and establishing a safe platform by which students can share thinking. More importantly, we raise questions and pose potential implications from these questions by considering Torres's RotL in the context of responsibilities of the learner.

What, if Anything, Are "The Responsibilities of the Learner"?

The underlying principles of CI posit that there are responsibilities of the learner that are crucial to the development of students' conceptual mathematical knowledge. Boaler & Anderson (2018) wrote about the role of student responsibility when they wrote about A4L (Assessment for Learning) in the United Kingdom:

> *One of the most important principles of A4L is that it teaches students responsibility for their own learning. At its core, A4L is about empowering students to become autonomous learners who can self-regulate, know what they most need to learn, and know ways to improve their learning . . . While A4L in the United Kingdom, its country of origin, is focused on ways of shifting responsibility to learners and creating self-aware students, we have found that A4L is more often presented in the United States as a set of strategies that do not include the central principle of shifting responsibility (Boaler, 2015). Kalinec-Craig (2017) promoted using "snapshots" of students' work to assess formatively, and we agree that this is an important approach for teachers that will bring important changes in classrooms, but it falls short of the responsibility and awareness change that we believe to be critically important. (p. 3)*

Boaler and Anderson articulated a stance that aligns with the understanding of a learner's responsibility that underpins CI. In fact, we as the authors agree that if a group of students learns more when every member shares their mathematical thinking and employs their unique set of skills to complete a group-worthy task, then would not the group limit their potential to learn from one another if a student chooses not to speak? Does not the student then have a responsibility to the group to contribute?

We must be clear that when we use the word "responsibility," we are not intending for the reader to conflate this with the word "accountability." It is possible for teachers to encourage active participation under the guise of accountability (e.g., "I will call on the student who doesn't seem to be paying attention as a way of redirecting their behavior"), but we strongly disagree with this intention. If teachers take up the notion of responsibility as accountability, they run the dangerous risk of policing the bodies and voices of students in their classroom. The way for teachers to

address this, however, is not to engage in carceral pedagogy by forcing students to participate (e.g., Annamma et al., 2019; Monroe, 2005) but to ask why they have decided not to engage in the classroom activities. More importantly, there is evidence that children of color are disproportionately disciplined and held to stricter behavior standards than white students who engage in similar behaviors. As Annamma et al. (2019) wrote:

> *Black girls (49%) were most likely (37%) to have their behavior labeled as disobedient or defiant, followed by multiracial (40%), Latina (36%), and Native (36%) students. Black girls (53%) were significantly more likely than all other girls (50%) to be referred for behavior deemed detrimental, whereas White girls (44%) were significantly less likely to be referred to the office for this reason. (p. 227)*

We emphasize this discrepancy because it is important for teachers (and TCs) to notice and name structural and systemic racism so that each student is afforded an education that is equitable and humanzing (Gutiérrez & Goffney, 2018). As a result, we suggest that if there are responsibilities associated with Torres's RotL, then taking them up could be what drives students to gain greater mathematical agency and self-efficacy in the classroom, and consequently, teachers and other adults may not see them as defiant or lazy. That being said, one might ask how much accountability (instead of responsibility) is built into the teacher-assigned groups roles in CI. We bring up this question as one of many that we hope others will explore further, since there is a rich discussion to be had about what constitutes a democratic implementation of CI; this paper only addresses one corner of it.

From the perspective of CI, a student who cannot or who chooses not to exercise their right to speak, listen, and be heard, for example, is understood to be a student with low status in the classroom. They may not speak because they do not feel comfortable sharing their thinking with group members they perceive as of having higher status; the student may exercise the right to speak but may not be heard due to their status in relation to the rest of the group; or the student may not listen because they do not feel as though they have any kind of a contribution. How, then, is such a student to develop agency in the classroom? CI's intricate system of assigned group roles and instructional moves (such as highlighting students' varied, and not necessarily traditionally recognized, mathematical strengths) is designed to address that problem. However, assigning a role to each member of the group also confers upon each of them the responsibility to carry out the assigned functions of that role. In CI, this is a means of helping students to engage in their learning and of conferring status; if each student has a task to carry out to contribute to the group's success, then the group cannot be successful without all these roles being fulfilled. Students hold a responsibility to each other that goes beyond simply their own part. Moreover, rotating roles within a group allows each student to either showcase a particular strength or work on developing one. This only happens if each student feels comfortable to take on a set of responsibilities.

In our experience, we notice there is a difference in the framings of responsibilities and rights when working with in-service teachers who are beginning to implement Torres's RotL; they consistently refer to a set of responsibilities associated with Torres's RotL: learners who have inalienable rights should also take up certain responsibilities (read: accountability and behavioral policing) to ensure the success of their learning. However, we offer an alternate formulation of the responsibilities associated with each right by raising questions that interrogate the appropriate balance between rights and responsibilities (see Table 1).

Students should feel safe both to exercise their rights and to opt out when they do not yet feel comfortable to do so. When students are not in a place to exercise their rights (and thereby, not to take on any responsibility for themselves, each other, and the collective group), then this should signal to the teacher that the learning environment needs to have a different set of conditions in place. These rights and responsibilities are ones that can help students take ownership of their learning while also reorienting their own thinking to that of their peers. It is an important mathematical practice, especially for prospective teachers (but also for K–12 students), to listen carefully to their peers' thinking and try to understand their peers' processes of solution. Teachers can structure lessons so that students utilize explicit talk moves that can scaffold students in learning to really listen to each other (Kazemi & Hintz, 2014). From the perspective of the democratic classroom, supporting students to build "listening" skills is vital to encouraging them to take the responsibility of safeguarding each other's rights to "speak, listen, and be heard."

In raising the issue of responsibilities of the learner, we address issues brought up by in-service K–12 teachers when they work with Torres's RotL. Often, when they discuss ways to introduce Torres's RotL to their students, the concept of the responsibilities of the learner came up in a natural association. The idea that rights needed to be paired with responsibilities go almost unquestioned in these discussions. If such a natural association exists, we must explore its consequences. In fact, we (Prasad & Kalinec-Craig) have debated with each other the appropriate role of responsibility in the classroom, with Prasad (coming from a CI perspective) arguing that true mathematics learning cannot happen without students taking up responsibilities for their own and their peers' learning, while Kalinec-Craig contends that teachers (some of whom may run the risk of posing as the sole authority figure) must bear the bulk of the responsibility for establishing and maintaining an equitable, safe classroom that honors students' Torres's RotL. However, we both agree that students can and should look to their teacher to lead the creation of a democratic classroom that is a safe space for students. In the following section, we propose two specific scenarios that bring to life the tensions articulated in Table 1 in the context of elementary mathematics content and methods courses.

Scenarios from Teacher Preparation

Both of us teach at the same institution and work with the same population of elementary TCs: Prasad teaches a mathematics content course, and Kalinec-Craig teaches a mathematics teaching-methods course. This university is designated as a large, Hispanic-Serving Institution, and the demographics of the teacher preparation program largely reflect the racial and socioeconomic

demographics of the university. More than 50% of the students are of Mexican and/or Central American descent, and more than 75% are enrolled full-time in coursework. Approximately 65% of TCs are transfer students from local community colleges before their junior year. The majority of students in the early childhood–sixth grade teacher preparation program identify as women and students from the local community. In this program, TCs complete a two-course mathematics content sequence generally during their sophomore year and enroll in a mathematics methods (i.e., pedagogy) course during their junior year while participating in a fieldwork experience.

The structure of our courses reflect the stances we take in mathematics education and, more broadly, teacher education (Kalinec-Craig et al., 2020). Teachers need to be prepared to honor and incorporate students' cultural, linguistic, and racial identities while also valuing the knowledge that they bring from their homes and communities. By using the research behind and framework of CI (among others), our teacher candidates learn that their ideas are valued and incorporated into their experiences as they learn to teach mathematics; this is done with the intention that they will eventually adopt a similar stance with their own students. When students play an explicit role in their own thinking and teachers push students' ideas to the foreground, there are more opportunities for students to learn and for teachers to promote an equitable learning environment.

We acknowledge that our practice as MTEs is not perfect, just as it is not for any teacher at any level of experience. The next paragraphs describe some of the challenges we have faced when considering the role of responsibilities in our classes that promote Torres's RotL in the hopes of encouraging others to engage in similar acts of self-reflection. The two exemplar scenarios we present are derived from the courses described. Both of these scenarios are relatively common occurrences and are taken from experiences we have each had in the first week of class. The students named and described in these scenarios are broad representations of multiple students across our experiences and not of any students in particular.

Both of us start the semester in similar ways: by introducing Torres's RotL and presenting students with a rich, group-worthy mathematical task (Lotan, 2003) that they do not necessarily already know how to solve. It is in this first week that students are still adapting to the idea of having rights in the classroom and may perhaps be thinking of our mathematics classrooms as hostile, rather than safe, spaces. The hypothetical scenarios we present explore a student "overexercising" her Torres's RotL (Scenario 1) and a student "opting out" of exercising her Torres's RotL (Scenario 2). Our intention in presenting these scenarios is to explore the notion of the (assumed and unassumed) rights and responsibilities of the learners.

Scenario 1: Overexercising the Torres's RotL (Priya V. Prasad)

Scenario 1 plays itself out in my classroom with regularity and is probably familiar to most mathematics teachers: a student getting frustrated with their confusion about a mathematical problem. I usually remind confused and frustrated students that they have the right to be confused and that confusion is a necessary aspect to mathematical learning (Boaler, 2015). This scenario starts by introducing a problem I commonly use in the first week of class: *How many diagonals does a convex n-gon have?* This problem asks students to come up with a formula for the number of diagonals in a polygon with an indeterminate (n) number of sides. A group of four students is working on this problem; before conferring with each other, they are individually drawing different polygons and counting the number of diagonals (see Figure 1).

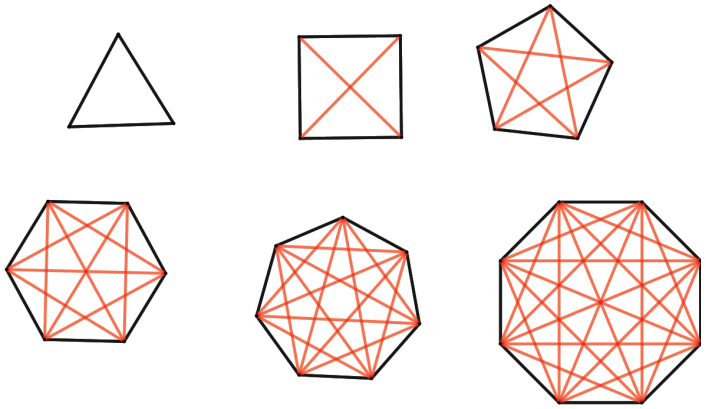

Figure 1. All Possible Diagonals Drawn Out in Different Types of Polygons

The focus of this scenario is Emma, a young white woman with enough comfort in college classrooms to express her thoughts openly in front of her peers and instructors, even on the first day of the course. Although nothing in Emma's subsequently described behavior is solely the province of high-status students, I want to introduce her as someone who is likely to be read as high-status by her peers; in fact, Emma is an amalgam of many students I have had over nine semesters of teaching this course, both in terms of her perceived status and her mathematical and behavioral responses to the first-day task. Emma organizes the information as shown in Table 2 From her written work, I can see that she has first tried to find a linear relationship between the number of sides of a polygon and the number of diagonals; this is impossible, as the relationship is not linear. At this point, Emma expresses frustration to her group and to me. "This doesn't follow a pattern!" she tells me. I respond, "Well, you can see that it doesn't follow a type of pattern that you first thought. Maybe it follows a different kind of pattern?" Emma replies, "This is the only kind of pattern I know. I don't know how you expect me to come up with a different pattern if you haven't taught it to us yet." I remind Emma, as I usually remind many students who express frustration, "It's okay to be confused about it; you have the right to be confused, and confusion is necessary to learning." Emma expresses dissatisfaction with this answer; she has the *right* to be confused, but she does not seem to *want* to be. Just because there exists the right does not mean that it is one that she wants to exercise.

Table 2. Emma's Table of Values That Does Not Follow a Linear Pattern

Number of sides (n)	3	4	5	6	7	8
Number of diagonals	0	2	5	9	14	20

However, Emma's frustration leaves her stranded in a state of confusion, as my choice of first-day problem is wont to do. Many students, due to previous experiences in mathematics classrooms where confusion is treated as an undesirable state that should be resolved as quickly as possible, grow frustrated with being confused. In this state, Emma does not take up any of her groupmates' strategies or engage with their ways of thinking. In this sense, Emma can be understood to be overexercising her right to be confused and to be abdicating the attendant responsibility to persevere through that confusion until she reaches a resolution. More importantly, she does not seem to be taking up the responsibility to honor her peers' rights to speak and be heard.

Even when students are just learning about (and learning to articulate) their rights as learners, there are a handful who will exercise them in a way that does not pay heed to how they might be affecting their peers. In a number of cases, these are students who have already assumed a high mathematical status based on their previous histories with mathematics classes, meaning that they feel comfortable in mathematics classrooms and their peers acknowledge them as knowledgeable in the subject. These students are accustomed to knowing almost immediately what to do to solve a mathematical task, and the CI pedagogical strategies that break down status hierarchies and my use of rich, nonstandard, group-worthy tasks to teach conceptually deep mathematics can disorient them. Students with high assumed status can be considered to have (or to need to take up) even more responsibility to attend to the rights of their peers.

To return to the example of Emma: her overexercising of her rights can affect her peers' space to exercise of their own rights, especially if those peers acknowledge Emma as a high-status student. For example, take Jayna, a Latina student in Emma's group who displays a great deal of mathematics anxiety and does not contribute her thoughts to the discussion. Students with high mathematics anxiety often have few prior experiences of mathematics that they consider successful (Harper & Daane, 1998; Stoehr, 2016). Jayna may consequently be hesitant to exercise her right to speak and be heard, since she does not think she has something meaningful to contribute to the discussion (potentially due to previous experiences of being silenced in mathematics classrooms). Witnessing Emma vocally exercise her right to be confused (and thus, her right to speak and be heard) may further dampen Jayna's exercising of her own rights. From a CI perspective, Jayna deciding not to exercise her right to speak comes from a perceived lack of status in the classroom and deprives her groupmates of the opportunity to learn from Jayna's thinking. In that way, Emma overexercising her right to be confused and her right to speak about that confusion can directly affect Jayna's exercising of her own rights. Moreover, students who are willing to vocally exercise (or overexercise) their Torres's RotL may, in fact, gain more status in the eyes of their peers'; their confidence in asserting these rights may be read (or misread) as confidence in a mathematics classroom in general. In this sense, the exercising of a student's Torres's RotL does not guarantee a breakdown in status hierarchies and may even contribute to the reification of them.

Debrief

This scenario speaks to the tension Kazemi (2018) brought up in her response to Kalinec-Craig (2017): At first, it is my (the instructor's) responsibility to step in and try to mitigate the effects of Emma's exercising of her right. However, eventually in a democratic classroom, I would hope that Emma recognizes that how her exercising of Torres's RotL affects Jayna and that she takes some responsibility for Jayna's learning by a judicious exercise of her own rights of the learner. In fact, it is in taking up the responsibility for each other's learning that students can negotiate the exercising of their own rights in relation to the rights of their classmates. In the scenario presented here, Emma's right to speak and right to be confused seems to collide with Jayna's right to be heard. Perhaps it is only by taking up the responsibility to decide not to exercise her right to speak and to instead exercise her right to listen that Emma will support Jayna's rights of the learner.

Status can mediate how Emma' choices affect (or do not affect) her classmates' exercise of Torres's RotL and therefore contribute or detract from the safety of the classroom. In CI, teachers hope that students will learn to notice the ways in which status differentials affect their peers' exercising of their rights of the learner. This is not to say that practitioners of CI believe that the responsibility for each other's learning must be forced upon students. Instead, CI provides a handful of strategies to encourage students to take up their responsibilities; in this sense, CI seeks to develop students' own abilities to notice and mitigate inequitable classroom participation. Thus, while the responsibility to interrupt status hierarchies may at first lie solely with the teacher, a CI classroom would be one in which students choose to take on that responsibility for themselves.

Additionally, our understanding of classrooms as racialized spaces (Martin, 2003) further complicates how students express their rights and are expected to take up their responsibilities as learners. Emma's identity and behavior may lead her peers to confer status upon her, whereas Jayna's peers may have racialized ideas of status that lead them to not confer status upon her. Emma's exercising of her rights can reify both her status and Jayna's since it directly affects how Jayna exercises her right to speak, listen, and be heard. The problem of practice in front of me, as the instructor, becomes this: What responsibilities can I expect each student to take up? Can (or should) I expect Emma to take responsibility to work through her own confusion? Can (or should) I expect her to think about how her exercising of her right to be confused is affecting Jayna and her other group-mates? And what responsibilities can I expect Jayna to take up? Is it fair to confer upon her the responsibility of exercising her right to speak, listen, and be heard when she does not feel safe enough in the classroom to do so? Is it equitable of me to never confer any responsibilities of the learner on Jayna, when she needs to be empowered to take on

mathematical authority and develop self-efficacy as much as Emma appears to show?

Thus, the contribution I hope this scenario makes to the discussion about rights and responsibilities in the classroom is that teachers and students consider how students' expression of their Torres's RotL affects other students and how teachers' expectations of students' responsibilities can exacerbate issues of equity in the classroom. How much responsibility do (or should) students have for attending to their expression of their rights? How much of that responsibility rests solely (and perpetually) with the teacher? I cannot claim to have any answers to these questions, but continuously reflecting on them in my practice has helped me begin to rehumanize my teaching of mathematics (Gutiérrez & Goffney, 2018). As the next scenario illustrates, we must also consider how and why some students might continue to opt out of taking on such responsibilities throughout a class.

Scenario 2: Opting Out of Exercising Torres's RotL (Crystal Kalinec-Craig)

After completing my coauthor's class, the TCs have one semester in which they engage in early-childhood theories, practices, and field-based experiences. Then in the following semester, they take a sequence of content-specific methods courses (mathematics, science, and reading comprehension) and an assessment course. The following scenario is one that typically happens within the first three weeks of my semester in mathematics methods.

It is a Tuesday afternoon in an elementary mathematics methods course, and the TCs are to learn about "teaching *through* problem solving" versus "teaching *about* problem solving." The TCs have been in the class for a few weeks and have discussed the notion of the Torres's RotL. The TCs have shared moments when their teachers encouraged these rights with them prior to our class and when their teachers actively (or passively) discouraged them from exercising Torres's RotL. The TCs and I (their instructor and lead for the elementary-mathematics methods courses) discuss the implications of helping children exercise their rights of the learner and what classrooms look and feel like when children do not feel safe to exercise their rights. I pose a challenging problem-solving task (that I learned from my mentor, Dr. Marcy Wood, personal communication, January 28, 2019) in which TCs learn to emphasize the actions in the problem story as they think about operations of fractions and ratios (Kalinec-Craig et al., 2020). I plan for the TCs to experience the ultimate aha moment when they see that the way to make sense of the problems is to find common numerators, instead of the much more common procedure of finding common denominators (as described in Kalinec-Craig et al., 2020):

> *A container ship overturned in the Pacific Ocean and several box cars of Nike shoes were lost overboard. The shoes started washing up in Oregon and Washington. They were collected and brought to a warehouse. When attempts were made to match them, they found that 1/2 of the left shoes matched 1/2 of the right shoes. What fraction of all the shoes have a match? When attempts were made to match them, they found that 2/3 of the left shoes matched 3/5 of the right shoes. What fraction of all the shoes have a match? (p. 235)*

As the TCs work on the task, there is one group where three students seem to be actively using the colored blocks and written pictures to model their thinking on a large piece of chart paper. The three TCs look at each other and point to one another's written work or models with the blocks. A fourth TC, Maribel, seated at the same table with the group, is not noticeably saying anything, responding, or asking anything of her group as they work on the task. She quietly sits back in her chair and watches the group. I come by to ask about the status of the group's progress. One student, Leyla, says that the group has an answer, but they aren't sure if it is right. Carrie agrees with Leyla and says that she got a different answer but wonders if she is wrong because Leyla presented three different solution strategies to justify her answer. Belinda shrugs and says that by watching Carrie and Leyla, she can see how both might be right, but she still needs time to work on her drawing that makes sense to her.

After hearing each of the students, I turn to Maribel and ask what she thinks of the task and of what the other students have said. "Do you agree? Disagree? What do you think?" Maribel turns to me and says, "I would rather not say. I don't feel like it's safe for me to say what I think yet." Sensing that I need to understand more as to why Maribel would rather not exercise her rights of the learner and share her thinking (and more importantly why she would not feel safe in the group to do so), I acknowledge Maribel and say, "I hear you. I think it is your right as a learner to opt out, but let me know what I can do to help you feel more comfortable to share in the group." Turning to the group, I add, "Maybe we need more individual time to think before everyone shares their ideas with each other?"

Debrief

This example from my course is one that I have seen many times before and is an amalgam of various experiences in my course over the years. The scenarios presented here seem to come from a place where teachers and students are beginning to learn ways that honor a potential fifth and more foundational right of the learner that Torres speaks of: the right to feel safe when sharing their thinking and helping others to feel safe as well. When the TCs work on a challenging task together (especially on the first day and in the first hour of our course), there remains the potential for students to not feel safe to share their opinion. Therefore, Maribel's words are not surprising for me when TCs are learning to establish trust among themselves at the beginning of the semester.

But what should teachers think about the fifth of Torres's RotL for the rest of the semester or year? For myself, I recognize their apprehension to share their thinking when they say, "I know I have the right to be confused, but . . . maybe I still don't want to tell you? Isn't that still my right?" Maribel's experience reminds me that the practice of opting out can mean much more. Traditional schooling practices such as convergent formative assessment (Pryor & Crossouard, 2008) tell us that students have learned when teachers value a particular expectation for how, when, and for what purpose they exercised their rights (e.g., teachers expecting students to only share answers that are correct and the most efficient; students feeling embarrassed for sharing a solution that is

not what the teacher expected). The aforementioned behaviors that teachers value in traditional classrooms only reifies a perspective of compliance and a false sense of active participation, which creates an inequitable loop that further validates the teacher's expectations and invalidates the students' ideas. As such, many classrooms seem to be a place where the expectation for student participation always seemed to reside within the purview of the teacher and never considered if, how, when, or where the student felt safe to share (and the source of this feeling). Martin (2013) has reminded us that classrooms are racialized spaces where racism, biases, and assumptions play a role in how students of color feel comfortable in taking risks with their thinking among their classmates and teacher. As such, this scenario could potentially perpetuate a subtext of teacher power and student accountability within the space of a racialized experience for the students and teacher.

Leaving a space for students to opt out can seem like a freeing experience for students, but it might also perpetuate a classroom where students go to a place where not sharing is a better (and safer) choice than to share and feel invalidated or attacked for their ideas. A teacher who sees a student as showing a "lack of participation" should not immediately perceive this as student defiance or laziness but a signal that the teacher needs to (re-)create a safe space to explore the ideas at hand. Teachers who uphold all of Torres's RotL embrace her words (Torres, 2020) as she described how she began to conceptualize these rights with her elementary-age emerging bilinguals: "My job is to discover you, but I'm going to need your help. I'm going to need you to tell me what are the conditions they're going to help you be the best that you can be" (36:37).

The notion of the responsibilities is not one that I have avoided but still leaves me unsettled because of how my assumptions for participation played out differently for students over the years. When I first started teaching with Torres's RotL, I assumed that as long as I committed to students' rights as learners, then my classroom was always a safe space in which students could learn and participate in the ways that felt most comfortable to them. Even still, when I gave students challenging tasks and supported their rights as learners, I noticed that some opted to not participate (at least in how I perceived "participation" then) and learned that this may have been because the fear of being wrong in public was stronger than any safe space that I could create. I was not seeing the complete and clear story with my students.

Since learning about Torres's RotL, I have considered how it should include the opportunity to say, "Thanks, but no thanks," with the signal change in my practice. To put it another way, I wonder if students should have the original four of Torres's RotL, including the right to feel safe to share their thinking, *and* the right to "sit this one out," that they should not carry the additional burden of feeling as though I see them not upholding their responsibilities as a student or as a member of a group working on a task. If I continue this line of thought that students can exercise their right to opt out, then there may be a flaw in my practice as a teacher educator and not in my students? If my students don't feel safe yet to express their thinking, why would I expect them to adopt a responsibility if space is not safe? I grapple with this tension to this day.

Discussion

In summary, students in a democratic classroom must have rights as learners, and those rights must be made explicit and kept consistent. However, can classrooms only function when all the responsibilities that are implicitly and explicitly delineated within them are taken up? But who takes up these responsibilities, and to what extent, is a broader question regarding the exercise of power in a classroom. Is it the sole responsibility of the teacher to be responsible for creating an equitable learning space and for ensuring that all students are learning, or is it more nuanced with respect to sharing responsibilities among all members of the class? Torres (2020) asked similar questions in a recent webinar: "Can students govern themselves? How can students be accountable for their choices and come to see their peers as resources? How do students know to have empathy for the rights and the rights of others?" (33:16). We pose this question back to the broader teacher education and education community to consider with us in this following discussion and broader journey.

Our paper describes the crux of the issue with which we have been grappling in both theoretical and practical terms in our courses for prospective elementary teachers. A teacher who thrusts too much responsibility on her students at once is violating an additional right of the learner: the right to opt out. Alternately, the teacher who continues to take on *all* the responsibility for her students' learning cannot develop self-motivated and self-efficacious learners. In mathematics classrooms, taking agency in problem-solving and trusting one's own authority to establish mathematical validity is crucial for the development of mathematical thinking (Schoenfeld, 1994). We can consider the social consequences of this as well: If the teacher is (and remains) completely responsible for managing students' interconnected exercise of Torres's RotL, students will never develop the skills needed for recognizing and safeguarding each other's rights of the learner, and consequently may never develop the requisite skills of listening and empathizing that are necessary for a functioning society. Additionally, the context in which we work adds another layer of urgency in supporting our students to honor Torres's RotL and to accept responsibilities. When preparing elementary teacher candidates, MTEs often face the twin challenges of helping develop the candidates' own agency and self-efficacy as well as teaching them to honor the mathematical thinking of those around them (and eventually, their future students); often this must be done in the space of three or four college semesters. It may be that the importance a teacher places on students' taking up the responsibilities of the learner in the classroom is a function of one's context. Possibly, practicing elementary teachers might see this as less significant than MTEs do.

In constant discussions and negotiations with each other over the course of multiple years, we have come to see Torres's RotL as a necessary foundation upon which the see-saw of responsibility for learning sits (see Figure 2). In the classroom, the responsibility for the whole class' learning shifts slowly from being located

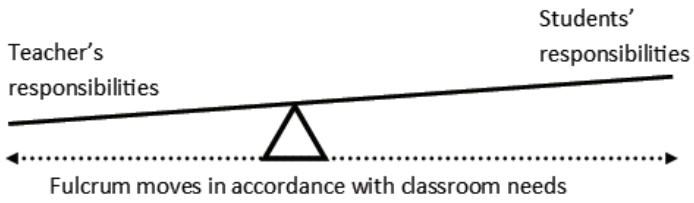

Figure 2. The Seesaw of Responsibility in the Classroom (Shown Here in a Potentially First-Day Configuration)

entirely with the teacher to being shared among the students, but that tipping point can only be reached when students choose to take on that responsibility for themselves. The ideal end goal may be an equilibrium that allows students to take on responsibilities when they feel safe in doing so, but that can tilt back toward the teacher if the safety of the classroom needs to be bolstered. For example, on the first day of class, the teacher can explicitly affirm that students have inalienable rights in the classroom that they can exercise (i.e., Torres's RotL). At this moment, it is almost solely the responsibility of the teacher to create a safe space for students to take the risks to exercise those rights and to support students to encourage each other to exercise the rights. From then on, through the use of CI and group-worthy tasks (for instance), students can learn to exercise and re-exercise their Torres's RotL as a means of participating in the democratic classroom, as the teacher continues to foster/nurture the safe space for students to exercise their Torres's RotL. Finally, we hope that these pedagogical strategies help the teacher to encourage her students in taking responsibility for each other's learning.

Not every student will exercise their Torres's RotL at the same place and time, perhaps because of complicated inter- and intra-actions between students' identities, due to the dynamic character of classrooms. There are moments when students will exercise their right to opt out, and the pillars of safety of the classroom need to make this an available choice, or when teachers might make an instructional move that does not always promote Torres's RotL. But the "responsibility" to oneself, to each other, and to the development of the class's thinking is an important goal that we should want students to take up; the autonomous nature of students exercising their rights (which includes the right to live and thrive in a safe space) is a goal that Torres might argue, given her existing work. Thus, it is important to view this development as a process of growth for a classroom, with an equilibrium that includes both rights and responsibilities for all participants in the democratic classroom. As the classroom democracy evolves, students take on more of the responsibility of their own learning and for co-creating a safe and productive learning environment. However, the onus is on the teacher for setting the initial conditions by introducing and reinforcing the Torres's RotL. Thus, to extend the metaphor, students must be encouraged to willingly mount the other side of the seesaw, and the teacher's job is to place the fulcrum at the appropriate place to encourage students to do so.

In addition, it is vital to acknowledge that classrooms are inherently hierarchical spaces; students enter school with the expectation that all the power and authority resides with the teacher. It is the responsibility of the teacher to cede that power and authority to the students. Torres's RotL is an important first step in setting up a classroom that is safe enough for students to take up some of the power and authority. This begs the questions: How do teachers encourage students to take up these responsibilities in the classroom? And who decides when and how students do so? As MTEs with experience as K–12 mathematics teachers and as students of mathematics, we propose the following principles for mathematics teaching that we wish to continue to uphold and refine:

1. We create opportunities to open and protect their students' rights of the learner.
2. We model for students the ways in which we all can uphold these responsibilities, both to themselves and to their peers.
3. We prepare for contingencies and anticipate issues that might arise, which could potentially insert more status issues and might encourage students to under- or overexercise their rights of the learner.
4. We acknowledge mathematics (all) classrooms as racialized and gendered spaces in which there are structures and systems that oppress some over others (Gutiérrez, 2018; Martin, 2003).

In this way, it is, and remains, the teacher's responsibility to manage the development of the classroom as it grows toward greater democracy and greater equity; it is teachers who ultimately decide what that looks and sounds like. This gives teachers a level of authority in the classroom that is inevitable and impossible to delegate, making it incumbent on teachers to notice and acknowledge the different forces that establish and reify status hierarchies between students (Buzzelli & Johnston, 20010). In this sense, teachers fill a governing role in classroom democracies. This accords with the role of the teacher implied by Hintz et al., (2018), but the agency granted to students in a democratic classroom implies that we must support students in developing and using that agency (Boaler & Anderson, 2018).

The ideas presented in this paper should not be the end of the discussion about the notion of rights and responsibilities in the classroom. We acknowledge that, just as with a democracy, issues such as power, implicit bias and racism, and greater inequities such as the experiences of students who face food, home, and economic insecurities, which affect how they learn and thrive, are still pervasive that should not be ignored. When teachers are explicit with the Torres's RotL in the classroom, they also should help students grow into a place of being responsible for their development and the space for others to grow in their thinking: a sense of responsibility to self and others. As students acknowledge a responsibility to self and the collective group, they can find more ways to exercise their rights as learners by pushing their thinking. We are cognizant of the idea that the concepts of both the rights and the responsibilities of the learner can be co-opted by those for whom they represent interest convergence, instead of just used by teachers with a sincere desire to establish democratic classrooms. That is, if students are forced to take on responsibilities that are

punitively enforced, then teachers are themselves contravening student's rights of the learner. An example of this is a classroom rules poster that denotes specific responsibilities of the students and explicitly aligns punishments for not fulfilling those responsibilities. In this case, the idea of responsibilities of the learner has mutated from a democratic ideal to a carceral pedagogy, subverting the entire aim of democratic classrooms. We should resist the idea of responsibilities being a matter of compliance and accountability; if students do not choose to take up certain responsibilities in the classroom, it is inappropriate to punish them for it. Instead, teachers can use the idea of responsibilities of the learner to help students invest in each other and in themselves. In this way, both rights and responsibilities can create classrooms that are democratic, but can also decenter hegemonic identities. Taking on responsibilities of the learner can encourage students to be mindful of overexercising their Torres's Rights of the Learner, making all students participants in disrupting classroom status hierarchies.

In the course of this paper, we have explored the relationship between rights and responsibilities as MTEs who are preparing the next generation of mathematics teachers. We invite the field to continue the discussion about the tensions that learners and teachers might face in a democratic mathematics classroom. Specifically, we acknowledge that there is much work to be done in helping teachers at all levels (K–12 and beyond) to operationalize similar ideas for their classrooms, which can lead to many associated lines of inquiry for teachers and researchers to pursue.

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